

LISTING OF THE CLAIMS:

The following is a complete listing of all the claims in the application, with an indication of the status of each:

- 1 1. (Previously presented) A car rental system comprising:
2 a fleet of cars, each of which is operable only when a valid digital key is presented
3 to the car, and each of said fleet of cars being capable of invalidating a digital key; and
4 a management system for handling reservation and car return, said management
5 system including:
6 a key generation system for generating digital keys for renters of the car rental
7 system;
8 a key return system for processing digital keys returned by renters,
9 wherein there exists no data communication link between the fleet of cars and the
10 management system.
- 1 2. (Previously presented) The system in claim 1, further comprising a parking lot
2 guarded by a security gate, said fleet of cars being parked within confines of said parking
3 lot when not rented by a renter of the car rental system, said security gate only opening
4 when a valid digital pass is presented by a renter of the car rental system.
- 1 3. (Original) The system in claim 1, wherein the management system is accessed by a
2 prospective renter over a network and the prospective renter is given a digital key to
3 operate a particular car and a digital pass to open the gate of the parking lot where said
4 particular car is parked, after said prospective renter completes a reservation for said
5 particular car, said digital key and digital pass being effective starting from the time
6 specified by said reservation.

1 4. (Original) The system in claim 3, wherein the prospective renter accesses the
2 management system at a kiosk located in the parking lot where the particular car is
3 parked.

1 5. (Original) The system in claim 3, wherein the prospective renter accesses the
2 management system over the Internet.

1 6. (Original) The system in claim 3, wherein the key generation system stores a digital
2 key on a storage device provided by a prospective renter.

1 7. (Original) The system in claim 6, wherein the storage device is a smart card.

1 8. (Original) The system in claim 6, wherein the digital key comprises car and user
2 identification (ID) signed by the management system to authenticate the digital key.

1 9. (Original) The system in claim 1, wherein a renter of a car invalidates a valid digital
2 key upon returning a car to the car rental system and presents an invalidated digital key to
3 the key return system to complete a car return.

1 10. (Original) The system in claim 9, wherein the invalidation of a valid digital key
2 includes storing car status information relevant to computing by the key return system a
3 receipt for the renter.

1 11. (Previously presented) A computer implemented method for operating a car rental
2 system comprising the steps of:
3 accessing a reservation server by a prospective car renter to reserve a car;
4 authenticating the prospective car renter by the reservation server and, upon the
5 reservation server successfully authenticating the user, prompting the prospective car

6 renter for the date, time, and location for pickup and return, and the type of car;
7 checking by the reservation server an availability of a requested car and, if a car is
8 available, creating by the reservation server a digital key by car and user information with
9 a digital signature of the reservation server; and
10 downloading the digital key to a portable storage device, the portable storage
11 device being used to gain access to a rental car without communication between the rental
12 car and the reservation server.

1 12. (Original) The method in claim 11, wherein the step of accessing the reservation
2 server is performed via a network.

1 13. (Original) The method in claim 12, wherein the network is the Internet.

1 14. (Original) The method in claim 11, wherein the step of authenticating a prospective
2 car renter includes the steps of:

3 prompting the prospective car renter to enter a personal identification number
4 (PIN); and

5 comparing the entered PIN with a valid PIN for the prospective car renter.

1 15. (Original) The method of claim 11, wherein the step of creating a digital key
2 comprises the steps of:

3 computing a hash of the car renter's valid PIN;

4 combining car and renter identification with the hashed PIN; and

5 digitally signing the combined information by said reservation server.

1 16. (Original) The method in claim 11, further comprising the steps of:

2 inserting the portable storage device by a car renter into a slot for receiving the
3 portable storage device in a rented car;

4 upon detecting the portable storage device inserted into the slot, obtaining by an
5 access controller installed in the rented car the digital key stored on the portable storage
6 device and checking by the access controller whether the digital key is valid and verifying
7 the signature on the digital key;

8 if the digital key is valid and the signature is verified, the access controller then
9 prompting the car renter to enter his or her identification and checking for correctness of
10 the car renter's identification; and

11 if the enter identification for the car renter matches a correct identification on the
12 portable storage device, the access controller activating instruments of the car which the
13 car renter is authorized to have access to.

1 17. (Original) The method in claim 16, further comprising the steps of:

2 upon receiving a car renter's request to return a car, prompting the car renter to
3 insert his or her portable storage device into the slot for the portable storage device;

4 obtaining by the access controller car status information and car identification;

5 creating by the access controller a return packet by combining car status
6 information and the current digital key;

7 signing the return packet by the access controller, appending the car identification
8 to the signed return packet, and saving the signed return packet into the portable storage
9 device; and

10 invalidating by the access controller a current digital key.

1 18. (Original) The method in claim 17, further comprising the steps of:

2 upon receiving a car renter's request to return a car, retrieving the return packet
3 from the portable storage device;

4 verifying a signature on the return packet; and

5 updating the car status and printing a receipt for the car renter.

1 19. (Original) The method in claim 11, wherein the portable storage device is a smart
2 card.

1 20. (Previously presented) The system in claim 1, wherein each of said fleet of cars has a
2 storage device for storing a record of the digital key.